

NASA TECH BRIEF



NASA Tech Briefs announce new technology derived from the U.S. space program. They are issued to encourage commercial application. Tech Briefs are available on a subscription basis from the National Technical Information Service, Springfield, Virginia 22151. Requests for individual copies or questions relating to the Tech Brief program may be directed to the Technology Utilization Division, NASA, Code UT, Washington, D.C. 20546.

Biological Handbook for Engineers

Useful microbiological background information has been compiled in a handbook for engineers and scientists working on bio-related projects. It is intended as an aid in: (1) evaluating the effects of engineering procedures on microbial life; (2) determining the effects of decontamination or sterilization procedures on the performance of an overall system; and (3) understanding the language of microbiologists.

Initially written for personnel working on planetary-landing spacecraft, the handbook should also be useful in industrial facilities such as pharmaceutical plants and electronic assembly clean rooms.

The information presented covers such subjects as: (1) the various categories of microorganisms, their physical characteristics, their relative abundances in various locations, their life cycles, and their genetics; (2) the methods and applications of decontamination and sterilization by wet or dry heat, chemical treatment, radiation exposure, and pressure treatment; (3) the relative success of various methods of contami-

nation control, such as filtration, clean rooms, laminar air flows, and shielding; and (4) the theory and techniques of bioassay—the detecting, identifying, and counting of microbes in specific locations. The final section comprises a glossary of common microbiological terms. The many references cited throughout the work guide the interested reader to additional information.

Note:

Requests for additional information may be directed to:

Technology Utilization Officer
Code A&TS-TU
Marshall Space Flight Center,
Marshall Space Flight Center, Alabama 35812
Reference: TSP70-10255

Source: General Electric Company
under contract to
Marshall Space Flight Center
(MFS-20349)

Category 05